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Nata

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LumCAT: 2-1589-A

Luminaire:

Report No: NT2017022303

Voltage(V): 218.5000

Test No: GC2017022303

Current(A): 0.1480

LampCAT: OSRAM PL-CORE-Z6-3000-830

Power (W): 30.7000

Lamp flux(lm): 2590.1

PF: 0.9490

Number of Lamps: 1

Ballast type: AC

Length(mm): 70

Width(mm): 70

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 2376.69

Efficiency(%): 91.76%

Lumens(lm)/Power(W): 77.42

Central intensity(cd): 6829.747

Maximum intensity(cd): 6829.747

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=28.0

[C90/270]Total=28.0

Field angle(10%Imax): [C0/180]Total=68.3

[C90/270]Total=68.3

Maximum s/h(1/2): C0\_180=0.48 C90\_270=0.48

Maximum s/h(1/4): C0\_180=0.46 C90\_270=0.46

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.25%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.105%

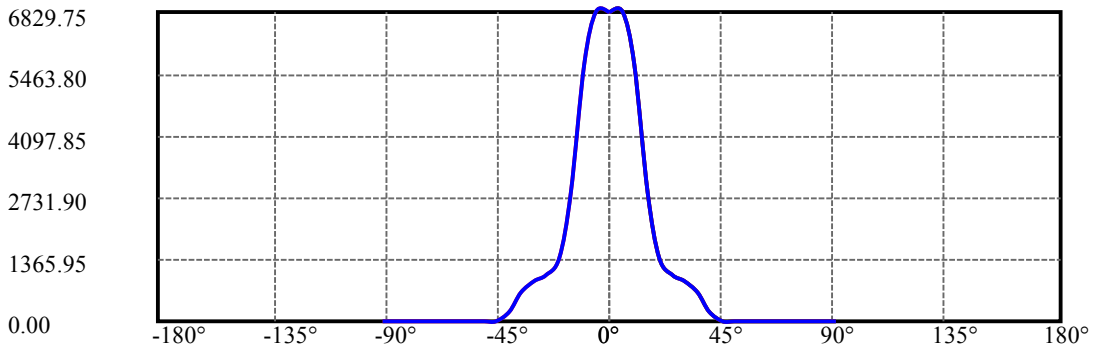
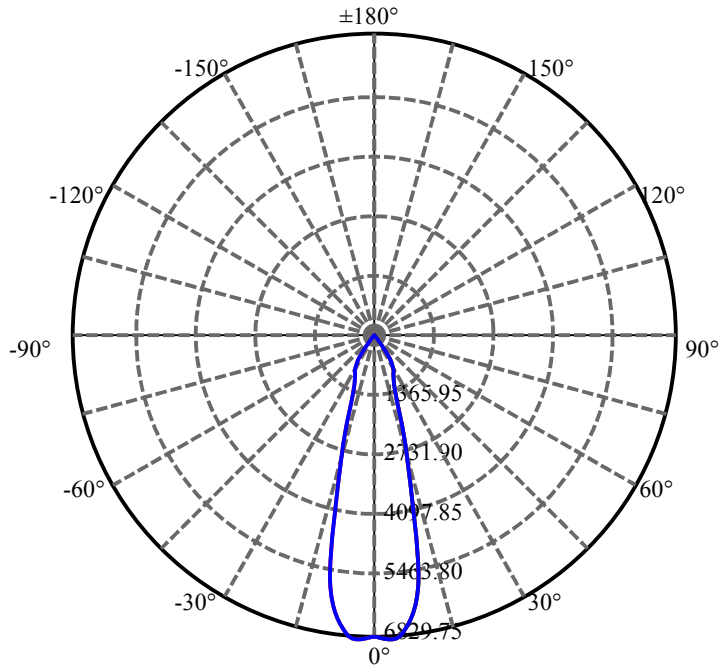
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6829.746	40.843	40.843	1.577%	1.718%
5.0	6822.176	325.918	366.761	12.583%	15.432%
10.0	5671.842	539.863	906.624	20.843%	38.147%
15.0	2851.440	404.529	1311.154	15.618%	55.167%
20.0	1379.651	258.649	1569.802	9.986%	66.050%
25.0	1009.101	233.761	1803.564	9.025%	75.886%
30.0	885.796	242.769	2046.333	9.373%	86.100%
35.0	640.863	201.487	2247.819	7.779%	94.578%
40.0	216.028	76.114	2323.933	2.939%	97.780%
45.0	17.542	6.799	2330.733	.263%	98.067%
50.0	11.383	4.780	2335.512	.185%	98.268%
55.0	10.798	4.848	2340.361	.187%	98.472%
60.0	10.509	4.989	2345.349	.193%	98.682%
65.0	10.289	5.111	2350.46	.197%	98.897%
70.0	10.158	5.232	2355.693	.202%	99.117%
75.0	11.582	6.132	2361.825	.237%	99.375%
80.0	12.697	6.854	2368.679	.265%	99.663%
85.0	10.048	5.487	2374.166	.212%	99.894%
90.0	9.194	2.520	2376.686	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2046.33	79.00%	86.10%
0-40	2323.93	89.72%	97.78%
0-60	2345.35	90.55%	98.68%
0-90	2374.17	91.66%	99.89%
0-120	2374.17	91.66%	99.89%
0-180	2376.69	91.76%	100.00%
60-90	33.81	1.31%	1.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.01	1901.35	73.41%	80.00%

ZONAL LUMEN SUMMARY

0-10	906.62
10-20	663.18
20-30	476.53
30-40	277.60
40-50	11.58
50-60	9.84
60-70	10.34
70-80	12.99
80-90	5.49
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

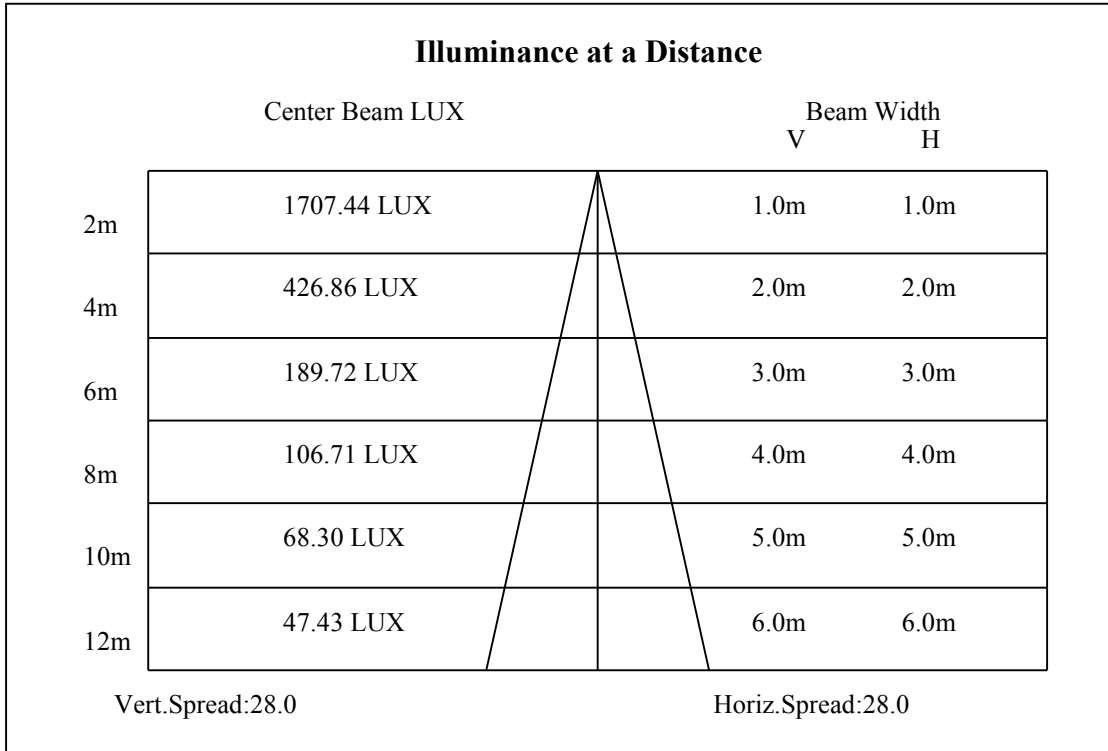
C90/C270: —————

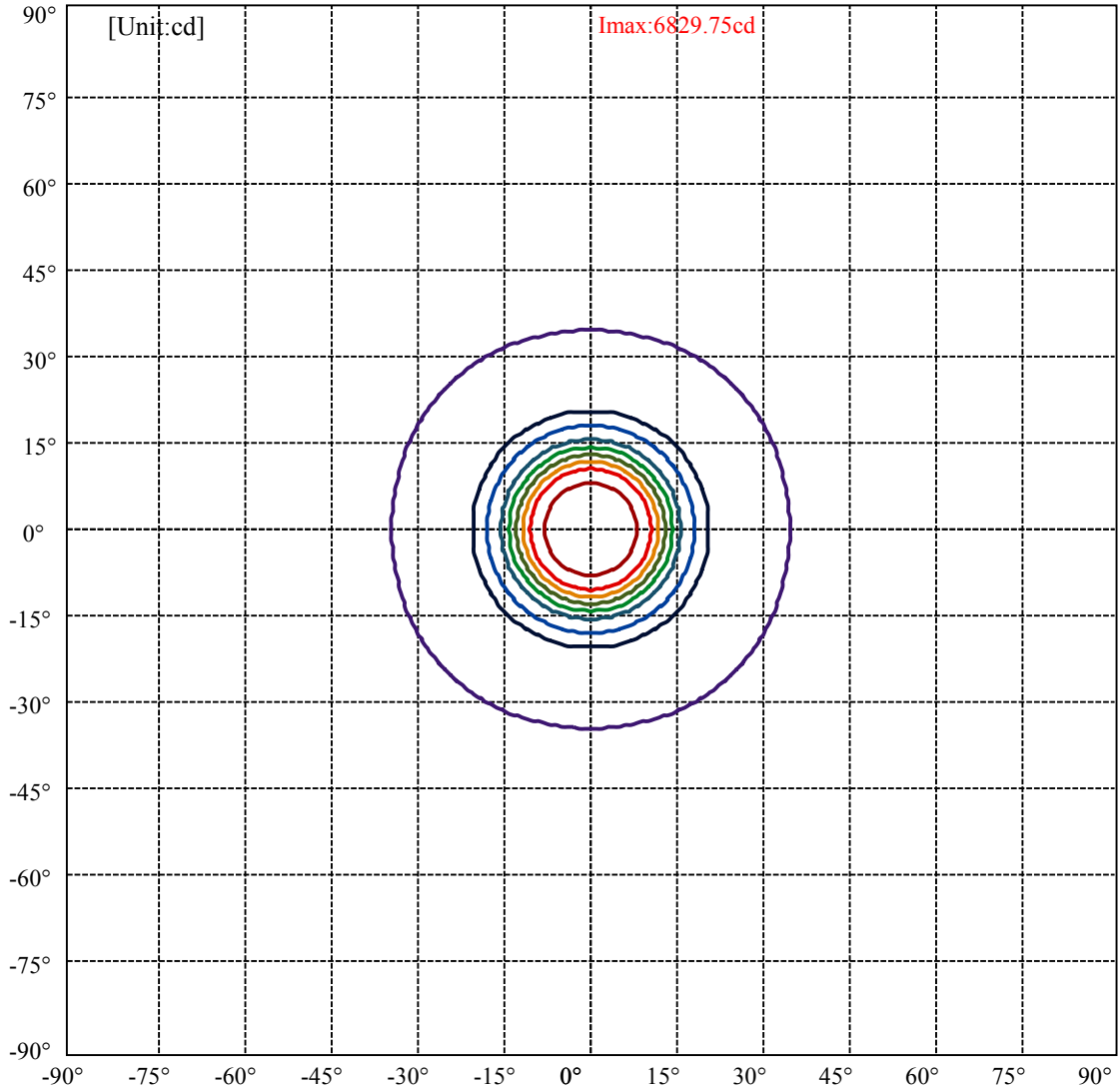
Field angle(10%Imax):C0/180Left:34.1 Right:34.1

:C90/270Left:34.1 Right:34.1

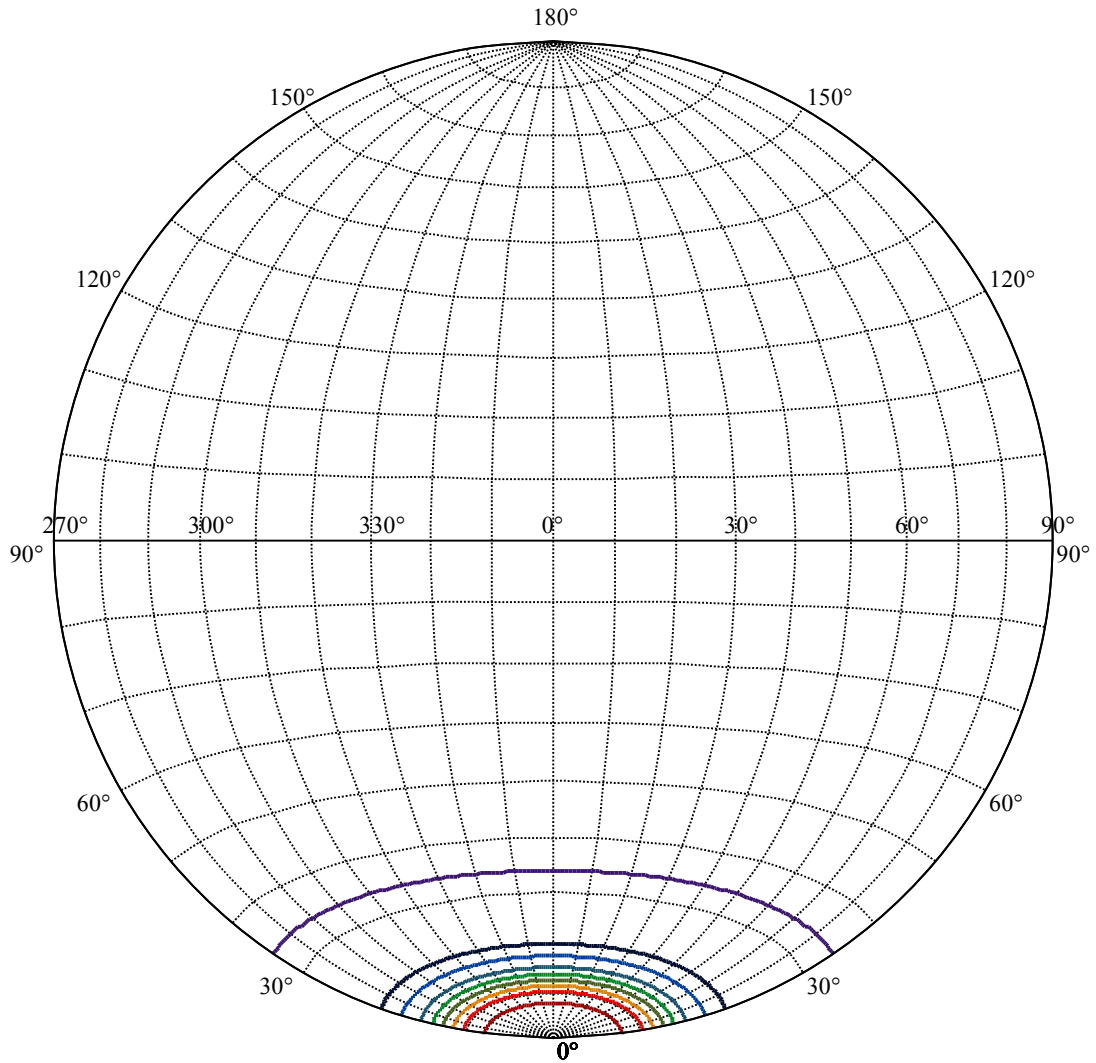
Beam Angle(50%Imax):C0/180Left:14.0 Right:14.0

:C90/270Left:14.0 Right:14.0





(10%I <sub>max</sub> ) 682.975	—
(20%I <sub>max</sub> ) 1365.95	—
(30%I <sub>max</sub> ) 2048.92	—
(40%I <sub>max</sub> ) 2731.9	—
(50%I <sub>max</sub> ) 3414.87	—
(60%I <sub>max</sub> ) 4097.85	—
(70%I <sub>max</sub> ) 4780.82	—
(80%I <sub>max</sub> ) 5463.8	—
(90%I <sub>max</sub> ) 6146.77	—



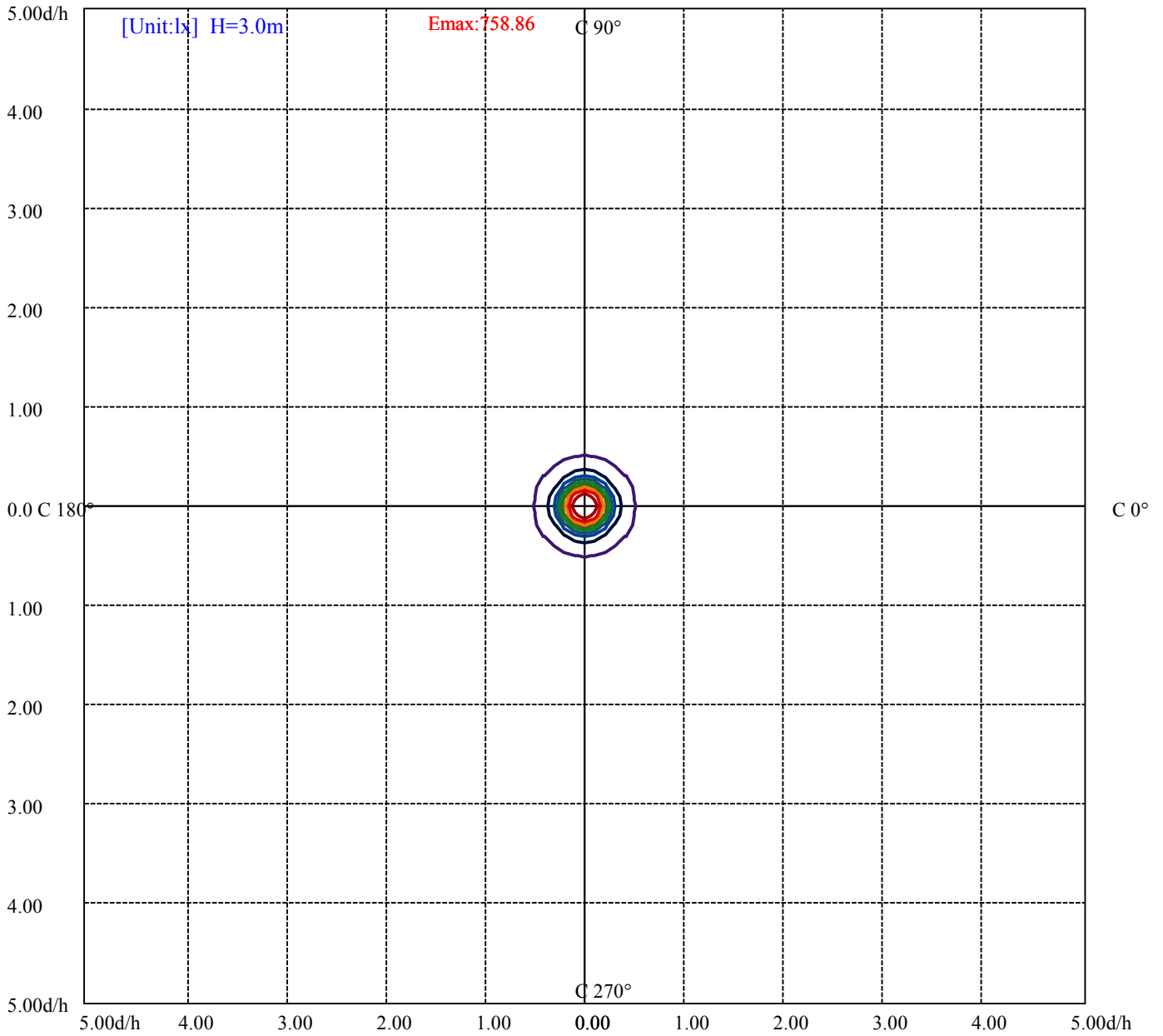
House

[Unit:cd]

Road

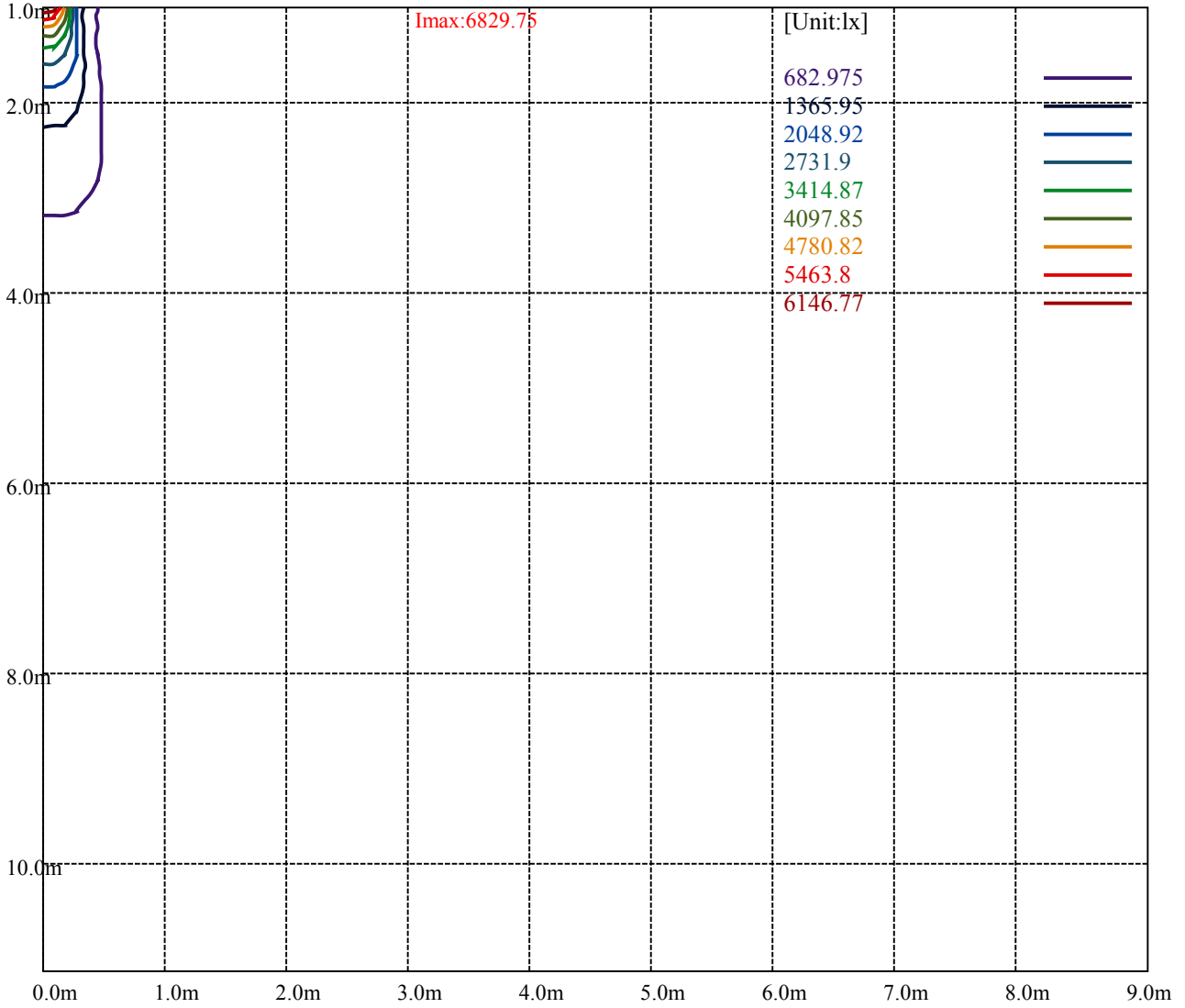
**Imax:6829.75**

(10%Imax) 682.975	—
(20%Imax) 1365.95	—
(30%Imax) 2048.92	—
(40%Imax) 2731.9	—
(50%Imax) 3414.87	—
(60%Imax) 4097.85	—
(70%Imax) 4780.82	—
(80%Imax) 5463.8	—
(90%Imax) 6146.77	—



(10%Emax) 75.88611	—
(20%Emax) 151.7722	—
(30%Emax) 227.6578	—
(40%Emax) 303.5444	—
(50%Emax) 379.43	—
(60%Emax) 455.3167	—
(70%Emax) 531.2022	—
(80%Emax) 607.0889	—
(90%Emax) 682.9744	—





Luminance Table

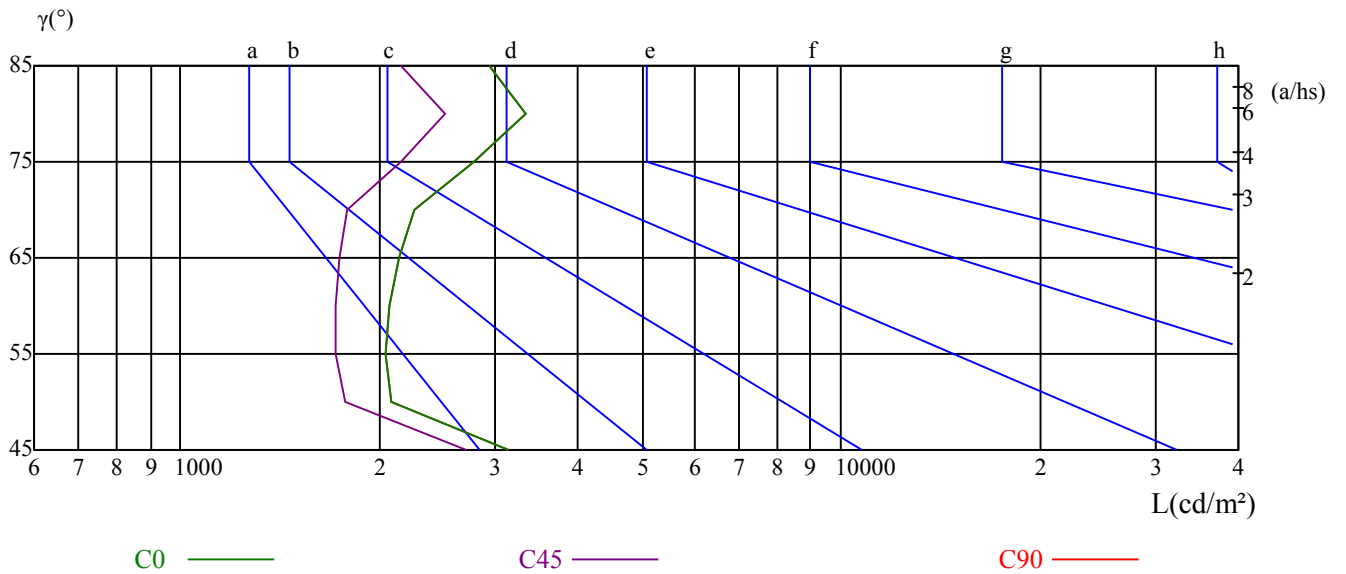
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3136	2087	2047	2078	2144	2255	2774	3328	2933
C45	2709	1776	1715	1713	1735	1790	2153	2518	2153
C90	3136	2087	2047	2078	2144	2255	2774	3328	2933

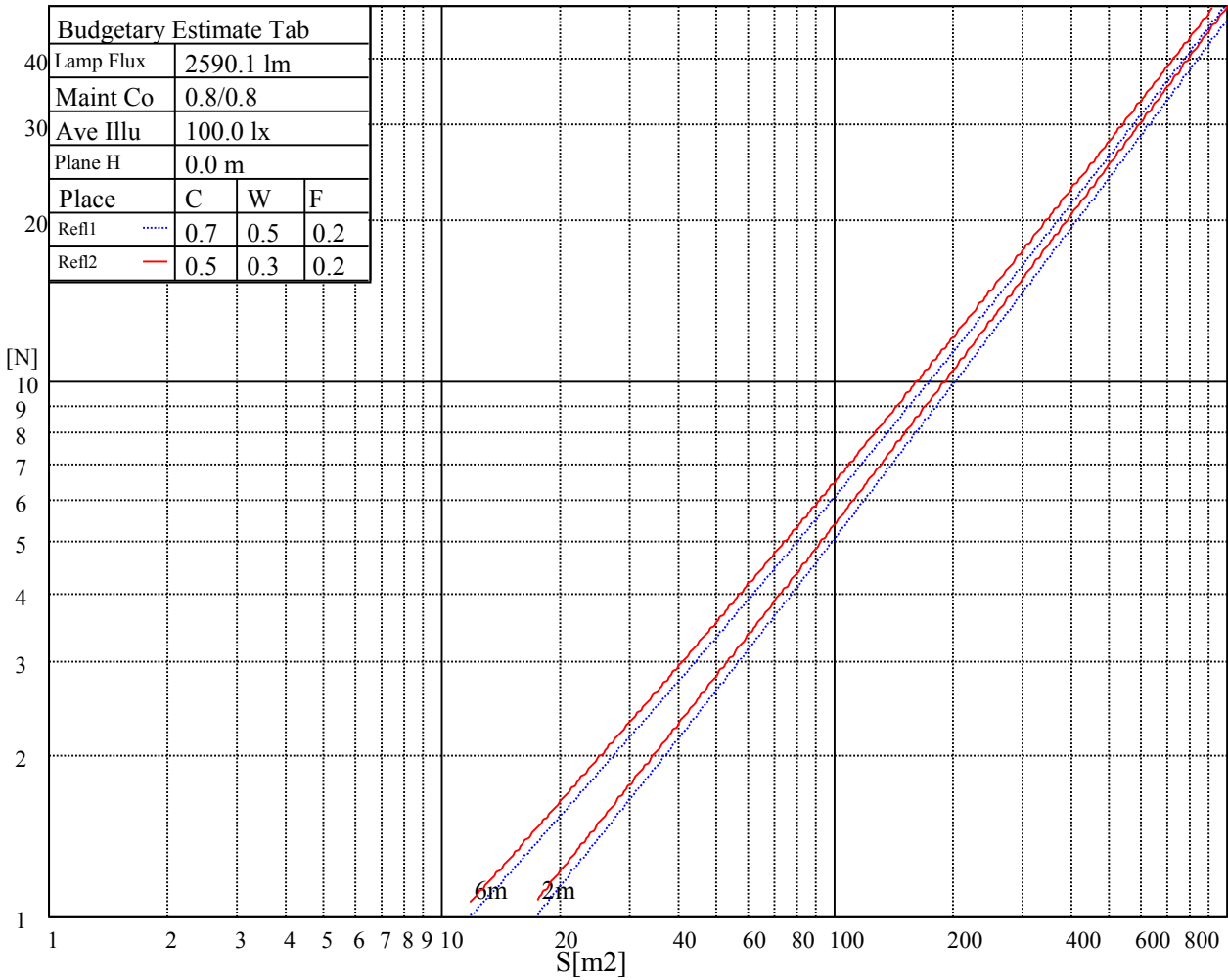
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4968	4968	4968	9133	9133	9133	23528	23528	23528

Glare Table

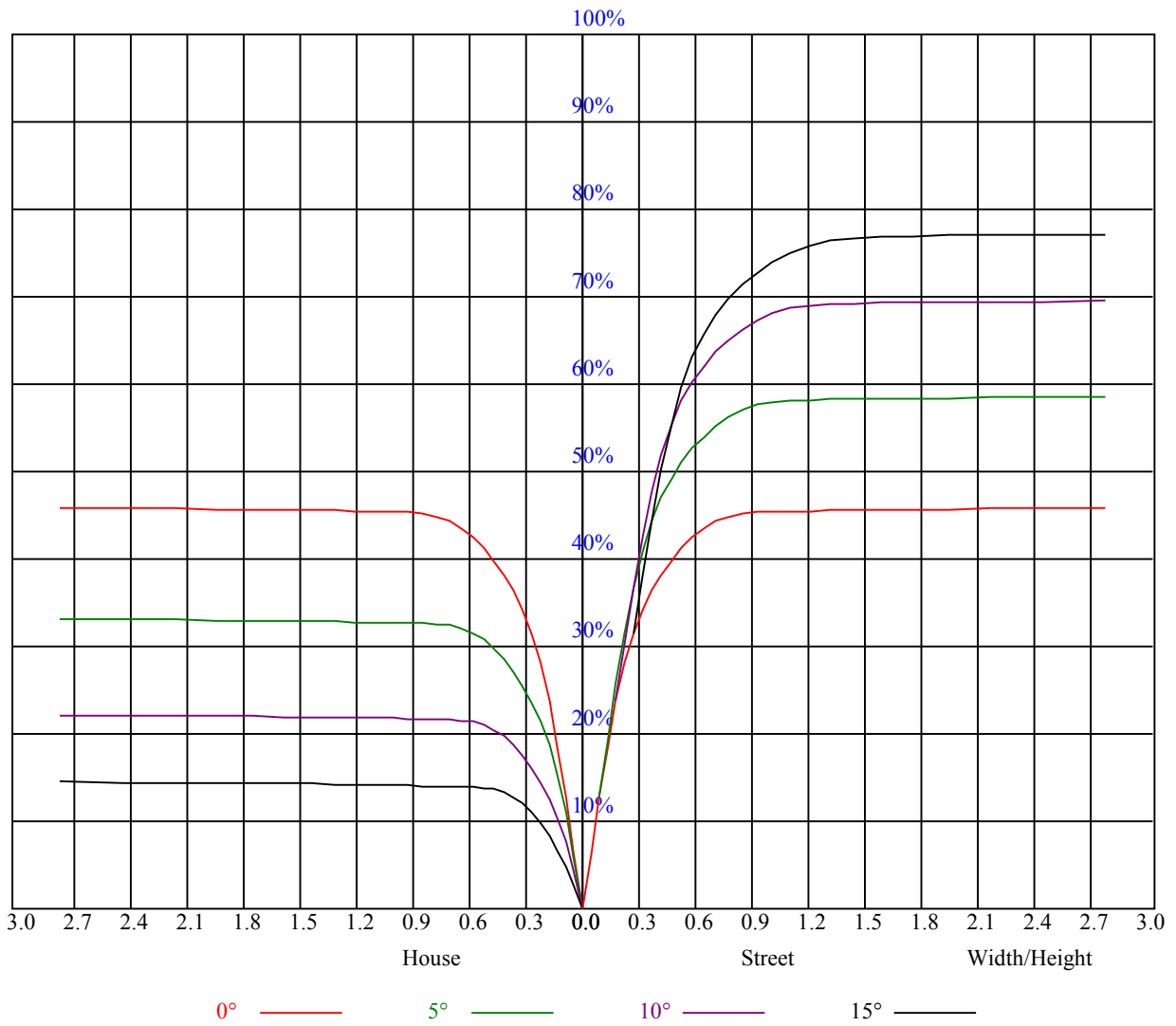
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.11	1.11	1.11	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.00	0.98	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.85	0.84	0.82
3	0.92	0.88	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.82	0.84	0.82	0.80	0.79
4	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.77	0.76
5	0.84	0.80	0.77	0.84	0.79	0.76	0.82	0.78	0.76	0.81	0.77	0.75	0.79	0.77	0.74	0.73
6	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.74	0.70	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.68
8	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
9	0.73	0.69	0.66	0.72	0.68	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
10	0.71	0.66	0.64	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	6994.92	6768.63	6051.25	3294.02	1431.47	1009.73	899.62	690.96	296.75
45.0	6840.76	6171.27	5480.31	3188.32	1576.82	1011.94	883.66	626.54	293.45
90.0	6611.17	5893.24	5267.25	3140.97	1515.15	1006.93	881.40	645.04	175.96
135.0	6872.14	6304.51	5708.80	3626.57	1669.86	1093.97	912.28	711.33	289.05
180.0	6994.92	7039.51	5669.16	2587.10	1288.32	984.46	865.05	581.95	108.02
225.0	6840.76	7594.48	5901.50	2416.43	1253.63	1001.04	885.14	644.49	168.36
270.0	6611.17	7569.70	6029.78	2416.98	1203.53	998.72	896.87	658.47	302.81
315.0	6872.14	7236.06	5266.70	2141.14	1098.43	966.02	862.35	568.13	93.82
360.0	6994.92	6768.63	6051.25	3294.02	1431.47	1009.73	899.62	690.96	296.75
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.22	11.45	10.79	10.46	10.24	10.08	11.78	14.04	10.02
45.0	16.08	11.40	10.90	10.63	10.35	10.19	9.97	10.13	9.97
90.0	16.90	11.40	10.85	10.52	10.30	10.08	10.24	10.79	10.35
135.0	17.78	11.73	11.07	10.74	10.46	10.35	11.45	15.75	10.19
180.0	15.25	11.40	10.79	10.57	10.41	10.24	15.36	15.97	10.02
225.0	18.00	11.23	10.68	10.41	10.24	9.97	9.80	9.74	9.63
270.0	22.41	11.29	10.68	10.41	10.19	9.97	9.74	9.63	9.36
315.0	15.69	11.18	10.63	10.35	10.13	10.41	14.31	15.53	10.85
360.0	18.22	11.45	10.79	10.46	10.24	10.08	11.78	14.04	10.02
C/ $\gamma$ (°)	90.0								
0.0	9.14								
45.0	9.30								
90.0	9.19								
135.0	9.19								
180.0	9.08								
225.0	9.30								
270.0	9.19								
315.0	9.14								
360.0	9.14								